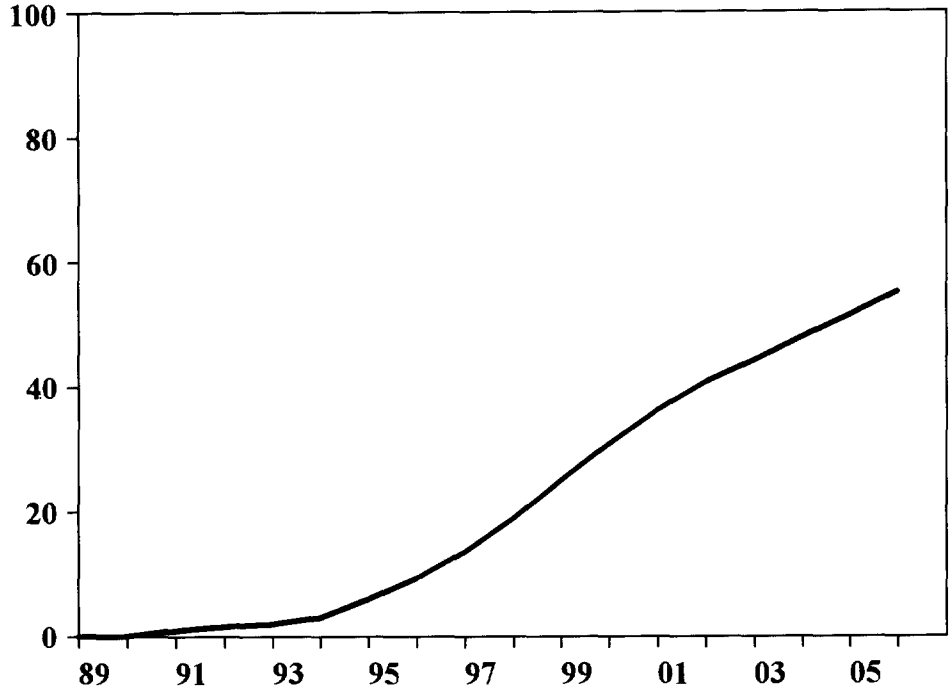
Figure 4
Household Penetration of the Internet
(Percent of Households)



Telework and Labor Force Participation

Over the last five years, the number of people working at home in the United States has grown to 44 million and is forecasted to continue to increase to almost 56 million by 1997. Home workers of all types, from full-time, self-employed people to employees who bring work home from the office, now comprise 31% of the U.S. work force aged 18 or older. The fastest growing segment of this market is telecommuters -- those who are employed by corporations and work at home during normal business hours -- which is expected to experience an 11.9% annual growth rate between 1992 and 1997. According to LINK Resources, almost 8 million individuals were regular telecommuters in 1993 and that number is forecast to reach 12 million by 1997.

There are several factors driving the growth of telecommuting and other forms of telework. From a worker's perspective, working from home, or from a site closer to home, can provide for the dual needs people are expressing for more flexibility and better control over their working lives. These needs are related to the increasing participation of women in the work force, increasing commute times, and declining affordability of housing. Incentives for companies to adopt teleworking programs generally fall into three categories: (1) the need to attract and retain high quality workers in response to labor shortages in certain skill areas and increasing costs of relocation; (2) the need to meet existing and proposed air quality standards which will require employers to look for ways, such as telecommuting, to reduce the amount of traffic they generate in congested areas; and, (3) a desire to reduce real estate costs by adopting "virtual" or flexible

office programs where employees working from home, client sites, or hotel rooms no longer have a traditional office at "headquarters."

Advances in computer and telecommunications infrastructure have altered the standard definition of the workplace, particularly for information workers. Links between work locations can be established through telephone conversations, facsimile transmissions, and electronic data transmission. Thus, information can be transmitted anywhere in the world almost instantaneously. As a result, where the work is performed is less important than it has been in the past. Since many teleworkers are information workers who have access to sophisticated information technology, they can perform their jobs from home or other remote location rather than traveling every day to the conventional office environment. Professions that are particularly well suited to telework include, but are not limited to, computer programmers, data entry specialists, engineers, accountants, sales people, and customer service representatives.

Telecommuting and teleworking can be practiced on a full-time or a part-time basis, where the worker goes to the traditional workplace as few as one to two days per week. While some companies have implemented formal policies and programs to facilitate telecommuting, it is conducted to a large degree on an informal basis, to accommodate workers' permanent or temporary personal circumstances. Some of the nation's largest companies and employers have adopted telecommuting. They include AT&T, Pacific Bell, Apple Computer, Sears, J.C. Penney, Travelers Corporation, US West, General Electric Plastics, IBM, Hewlett-Packard, the Federal government, and many state and local governments.

There has also been a rise in the past few years in "telework" centers, located near or in residential areas, equipped with the necessary telecommunications equipment, which serve employees of single or multiple firms. Office space and equipment can be rented on a monthly, daily or even hourly basis, according to workers' and employers' needs. The Federal government, for example, has established four telework centers near the Washington, D.C. metropolitan area that enable government employees to avoid long, unproductive commutes several days a week.

Finally, the recent trend towards "reengineering" of large corporations has left many highly skilled information workers out of traditional jobs. Computers and other information technologies, however, are enabling many of these professionals to establish themselves as consultants or micro-business workers who can compete effectively with larger organizations while teleworking from home. In some cases, the very companies that drastically reduced head count are finding these highly skilled information entrepreneurs a critical source of just-in-time expertise.

The Role of Technology

Overall, currently available telecommunications services seem adequate for many teleworking situations. However, wide-bandwidth services and lower prices required for video functions or transfer of very large quantities of data are often lacking. A more advanced telecommunications infrastructure would enable more wide scale and sophisticated teleworking to occur. Resolution of the complex regulatory and legislative issues involved in creation of a high-capacity, broad-bandwidth U.S. telecommunications infrastructure could accelerate the adoption of teleworking.

The proliferation of and decline in the prices of personal computers, modems, fax machines, and telecommunications services have been critical to making teleworking a viable alternative to traditional workplace paradigms. Continued improvements in both price and performance of all these technologies are expected to further facilitate the growth of telework. In fact, teleworkers are now driving some of the demand for enhancements to these very products and services. The 39 million people in the U.S. who fall into the home worker category (this includes, but is not limited to telecommuters) spent almost $15 billion for telecommunications products in 1993 and over $13 billion for work related telephone calls and on-line services.

According to Gil Gordon Associates, changes in the telecommunications industry, such as the opening of local and long distance service markets, the rise of cellular and wireless services, and the push by cable operators to enter into data and voice services, will benefit teleworkers and their employers. They report that the single biggest technology cost for telecommuting in the future will not be equipment, but rather monthly phone bills. Prices for personal computers and other electronic equipment continue to fall, they receive favorable tax treatment as capital investments, and are a one-time cost. The phone bill, on the other hand, is a monthly expense that can typically exceed $200/month for a teleworking household. The ongoing cost and proliferation of teleworking, therefore, will depend largely on the size of the monthly phone bill.

Potential Labor Force Impact

Teleworking, in all of its various forms, has the potential to not only improve the productivity and quality of work life for those already employed, but to provide or indirectly stimulate new employment opportunities for people not currently participating in the labor force. For those who have left or not entered the work force because their needs for flexibility and control were incongruous with the traditional office worker model, teleworking opportunities enable these people to enter the work force. For white-collar workers who find themselves out of work due to corporate downsizing, the use of information technologies and teleworking is often an effective route back into the work force.

In rural areas, satellite offices or telework centers can provide quality jobs for rural residents. While they clearly benefit local economies, not all rural work centers result in a net increase in labor force participation. Some of the jobs in these rural telework centers replace previously-existing urban jobs. However, rural teleworking enables companies whose growth is constrained by high urban labor costs and skilled labor shortages to take advantage of lower rural labor costs and expanded labor markets and, in the process, create new jobs. In addition, rural telework centers can help provide an environment that fosters the creation of new businesses. In rural Kentucky, two new "televillages" provide telecommunications and information technology-rich work space and services for professionals as well as training and other resources to support entrepreneurs.

Access to the latest in computers, video and document conferencing, fax, scanning, voice and electronic mail, etc., enable professionals and small business persons to be fully connected and fully competitive with their urban counterparts and can facilitate their full participation in the labor force. In addition, since teleworking and virtual office arrangements reduce office space requirements and thus decrease the cost per employee, all companies, and particularly those in

high-cost urban areas, will be able to employ more people without increasing their real estate costs.

The assumed drop in long distance prices and the resulting improvements in service and application capabilities due to competition accelerates the teleworking trends described above that are included in the Baseline forecast. Thus, in the Long Distance simulation, the labor force participation rate is assumed to increase 0.5% in total over the next ten years relative to the Baseline forecast. However, as noted earlier, rapid advances in the use of information technology could easily shift the employment paradigm more than anticipated, making lower-priced long distance service even more valuable to businesses and households. This would result in an even greater increase in the labor force participation rate and generate an even larger benefit to the Oklahoma economy in terms of jobs and economic activity than presented in this report.

FORECAST COMPARISON

In the Long Distance simulation, the Oklahoma economy expands faster than in the Baseline forecast, creating new jobs, generating additional income, and stimulating increased spending across practically all segments of the economy.

Total non-agricultural employment increases from 1.344 million workers in 1996 to 1.535 million workers in 2006 in the Long Distance simulation. Employment growth averages 1.34% per year over the ten-year interval, slightly faster per year than in the Baseline forecast and just ahead of the national average. Thus, the Long Distance simulation depicts an economy that performs better over the next ten years and creates an additional 10,252 jobs in the process.

Figures 5 and 6 and Tables 2 and 3 on the following pages compare the Long Distance simulation to the Baseline forecast for a variety of key variables for the Oklahoma economy. Figure 5 summarizes the state-wide employment outlook. The bars represent the number of new jobs created by 2001 and by 2006 due to elimination of the competitive barriers that currently exist in long distance markets. Additional competition with SBLD's entry into the interLATA long distance markets pushes long distance rates lower. More competition and lower long distance prices yield enhancements in the public network, accelerate the trend toward the use of information services, and help users take advantage of continuing advances in hardware and software technologies. This activity adds 4,768 jobs in 2001 and 10,252 jobs in 2006 throughout the State. As Figure 6 illustrates, there is a corresponding increase in Gross State Product over the next ten years. Almost half of the improvement in GSP accrues to the state by 2001 when an additional $339 million in GSP is expected. By 2006, the increased GSP amounts to $712 million.

Table 2 presents the employment gains across major industry groups in the state. As shown, all industries benefit from the increase in economic activity with the broad service sector gaining the most jobs -- over 4,800. Manufacturing gains nearly 1,900 jobs, while some of the other major sectors each gain several hundred jobs over the next ten years. This results from the economic linkages between and among industries and the final demand sectors. As noted above, WEFA's modeling system represents the dynamic linkages that exist throughout the Oklahoma state economy. Thus, the results presented here provide a comprehensive picture of the expected improvements throughout the economy that result from SBLD's entry into the interLATA long distance markets, not merely the isolated improvement in the telecommunications industry and the long distance markets.

Table 3 provides the detailed industry view for GSP that Table 2 provides for employment. Again, the broad services sector is the biggest gainer over the next ten years and manufacturing is the second largest gainer. Tables 4 and 5 list the total employment and total GSP impacts in the metropolitan areas and the remaining non-metropolitan area that are affected by immediate competition in long distance markets. While most of the benefits are expected to be in the major metropolitan areas, the effects of lower-priced services and new applications could be much greater in the rural areas than the current distributions of employment by industry by county suggest. Thus, the gains in employment and economic activity in the smaller metropolitan areas and in the rural areas could be much greater than presented in this report, resulting in greater benefits for the entire state.

Figure 5
Employment Gains in Total
(Thousands of Jobs Gained)

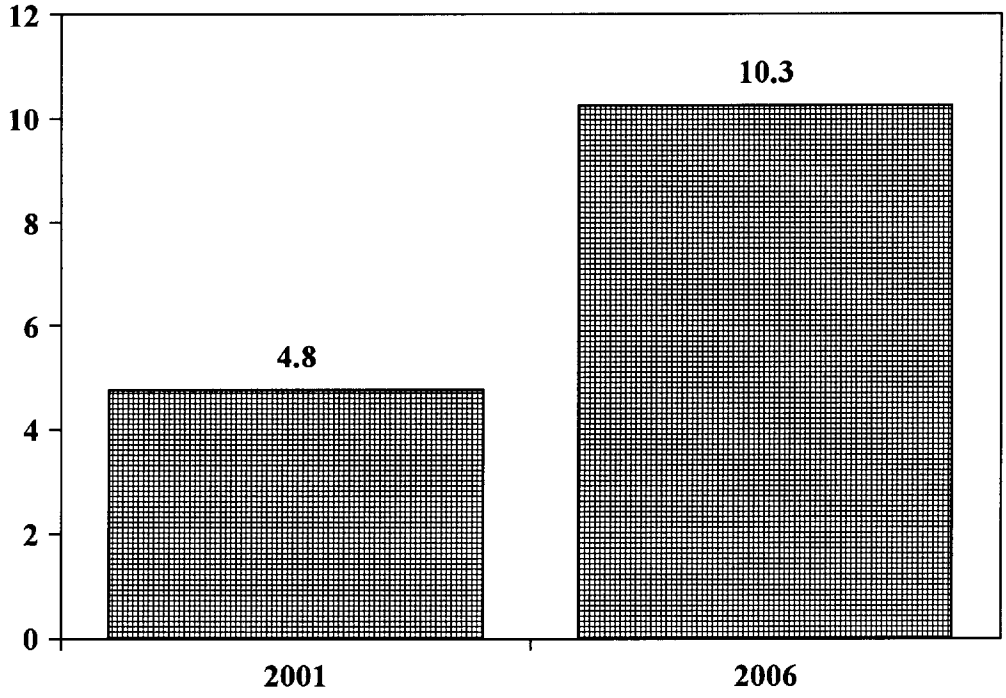


Figure 6
Gross State Product Gains in Total
(Millions of 1992 Dollars Gained)

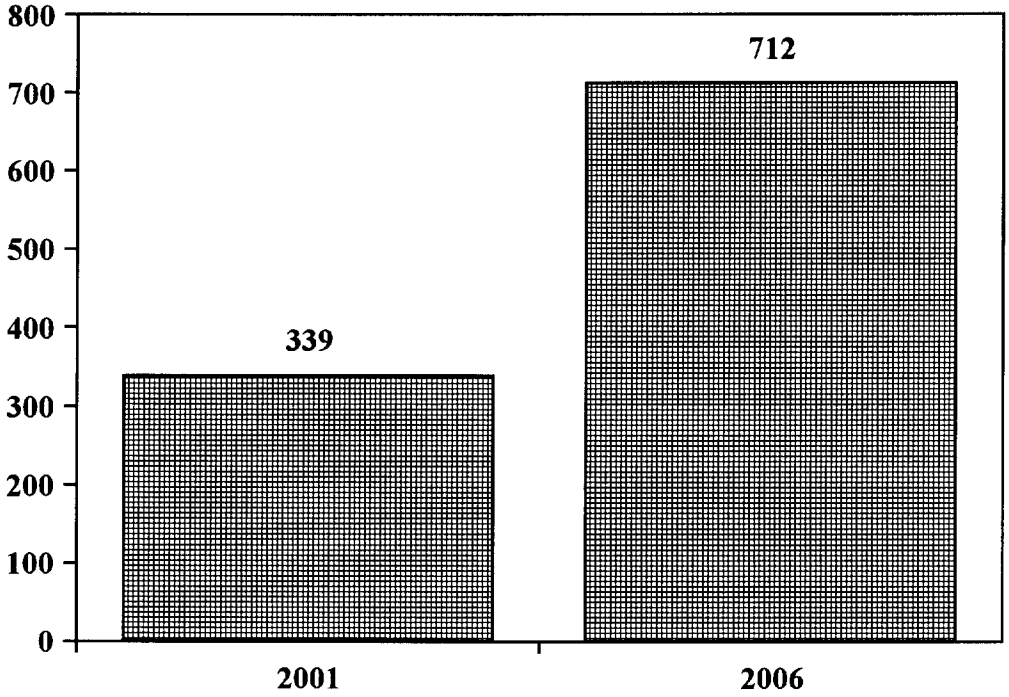


Table 2
Employment Forecasts by Industry
Long Distance Competition Job Impacts
(Number of Jobs)

Description	1996	2001	2006	Compound Annual Percent Growth 1996-2001	2001-2006	1996-2006
TOTAL						
Baseline	1344472	1444013	1525322	1.44	1.10	1.27
Simulation		1448781	1535574	1.51	1.17	1.34
Difference		4768	10252			
Mining						
Baseline	31656	30806	31918	-0.54	0.71	0.08
Simulation		31060	32195	-0.38	0.72	0.17
Difference		254	277			
Construction						
Baseline	48843	47489	46688	-0.56	-0.34	-0.45
Simulation		47537	46889	-0.54	-0.27	-0.41
Difference		48	201			
Manufacturing						
Baseline	168097	164922	160670	-0.38	-0.52	-0.45
Simulation		165169	162566	-0.35	-0.32	-0.33
Difference		247	1896			
Transp./Utilities						
Baseline	75702	78945	80071	0.84	0.28	0.56
Simulation		79218	80489	0.91	0.32	0.62
Difference		273	418			
Wholesale/Retail						
Baseline	320243	341444	352953	1.29	0.67	0.98
Simulation		342400	354180	1.35	0.68	1.01
Difference		956	1227			
Financial Services						
Baseline	66972	67591	68209	0.18	0.18	0.18
Simulation		67729	68399	0.23	0.20	0.21
Difference		138	190			
Other Services						
Baseline	363904	432709	496241	3.52	2.78	3.15
Simulation		435067	501087	3.64	2.87	3.25
Difference		2358	4846			
Government						
Baseline	269055	280107	288572	0.81	0.60	0.70
Simulation		280601	289769	0.84	0.65	0.74
Difference		494	1197			

Table 3
Gross State Product Forecasts by Industry
Long Distance Competition Impacts
(Thousands of 1992 Dollars)

Description	1996	2001	2006	Compound Annual Percent Growth 1996-2001	2001-2006	1996-2006
TOTAL						
Baseline	66286655	72388192	78410967	1.78	1.61	1.69
Simulation		72727255	79123042	1.87	1.70	1.79
Difference		339063	712075			
GSP Agriculture						
Baseline	1896267	2392761	3289109	4.76	6.57	5.66
Simulation		2396211	3300141	4.79	6.61	5.70
Difference		3450	11032			
GSP Mining						
Baseline	2529562	2330102	2177679	-1.63	-1.34	-1.49
Simulation		2359505	2205913	-1.38	-1.34	-1.36
Difference		29403	28234			
GSP Construction						
Baseline	2122805	1992499	1912113	-1.26	-0.82	-1.04
Simulation		1995609	1924331	-1.23	-0.72	-0.98
Difference		3110	12218			
GSP Manufacturing						
Baseline	9891602	10323263	10961146	0.86	1.21	1.03
Simulation		10345387	11163556	0.90	1.53	1.22
Difference		22124	202410			
GSP Transp./Utilities						
Baseline	7264708	7898569	8564828	1.69	1.63	1.66
Simulation		7939354	8626491	1.79	1.67	1.73
Difference		40785	61663			
GSP Whlsale/Retail Trade						
Baseline	10737099	11853636	12594208	2.00	1.22	1.61
Simulation		11904958	12648679	2.09	1.22	1.65
Difference		51322	54471			
GSP Finance						
Baseline	10473123	11016183	11929160	1.02	1.61	1.31
Simulation		11050866	11970862	1.08	1.61	1.35
Difference		34683	41702			
GSP Services						
Baseline	11860646	14525645	16627481	4.14	2.74	3.44
Simulation		14653723	16872038	4.32	2.86	3.59
Difference		128078	244557			
GSP Government						
Baseline	9510843	10055534	10355243	1.12	0.59	0.85
Simulation		10081642	10411031	1.17	0.65	0.91
Difference		26108	55788			

Table 4
Employment Forecasts by Geographic Area
Long Distance Competition Job Impacts
(Number of Jobs)

Description	1996	2001	2006	Compound Annual Percent Growth 1996-2001	2001-2006	1996-2006
STATE TOTAL						
Baseline	1344472	1444013	1525322	1.44	1.10	1.27
Simulation		1448781	1535574	1.51	1.17	1.34
Difference		4768	10252			
ENID						
Baseline	24567	25762	26590	0.95	0.63	0.79
Simulation		25787	26639	0.97	0.65	0.81
Difference		25	49			
FORT SMITH						
Baseline	7227	8515	9863	3.33	2.98	3.16
Simulation		8518	9868	3.34	2.99	3.16
Difference		3	5			
LAWTON						
Baseline	38531	40696	42159	1.10	0.71	0.90
Simulation		40736	42246	1.12	0.73	0.92
Difference		40	87			
OKLAHOMA CITY						
Baseline	497538	525845	547087	1.11	0.80	0.95
Simulation		528434	552467	1.21	0.89	1.05
Difference		2589	5380			
TULSA						
Baseline	352287	386925	416341	1.89	1.48	1.68
Simulation		388769	420488	1.99	1.58	1.79
Difference		1844	4147			
REST OF STATE						
Baseline	424322	456270	483282	1.46	1.16	1.31
Simulation		456537	483866	1.47	1.17	1.32
Difference		267	584			

Table 5
Gross State Product Forecasts by Geographic Area
Long Distance Competition Impacts
(Thousands of 1992 Dollars)

Description	1996	2001	2006	Compound Annual Percent Growth 1996-2001	2001-2006	1996-2006
TOTAL						
Baseline	66286655	72388192	78410967	1.78	1.61	1.69
Simulation		72727255	79123042	1.87	1.70	1.79
Difference		339063	712075			
ENID						
Baseline	1228371	1295280	1352015	1.07	0.86	0.96
Simulation		1298265	1357476	1.11	0.90	1.00
Difference		2985	5461			
FORT SMITH						
Baseline	319699	383031	452835	3.68	3.40	3.54
Simulation		383357	453534	3.70	3.42	3.56
Difference		326	699			
LAWTON						
Baseline	1769765	1902006	2009563	1.45	1.11	1.28
Simulation		1905674	2017258	1.49	1.14	1.32
Difference		3668	7695			
OKLAHOMA CITY						
Baseline	23623927	25396442	26996436	1.46	1.23	1.34
Simulation		25565247	27339158	1.59	1.35	1.47
Difference		168805	342722			
TULSA						
Baseline	17648543	19621477	21536541	2.14	1.88	2.01
Simulation		19747950	21814286	2.27	2.01	2.14
Difference		126473	277745			
REST OF STATE						
Baseline	21696350	23789956	26063577	1.86	1.84	1.85
Simulation		23826762	26141330	1.89	1.87	1.88
Difference		36806	77753			